

## Bald Eagle Pursues and Injures Snow Goose in Flight

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The Bald Eagle (*Haliaeetus leucocephalus*) employs several hunting methods in capturing avian prey. They have been observed capturing waterfowl (Parris et al. 1980) and ptarmigan (Sherrod et al. 1977) on land by approaching close to the ground, and eagles also have been seen flying low between ocean swells, (White 1974) diving from a high altitude, (Meinertzhagen 1959; Sherrod et al. 1977) or returning to the surface from an underwater dive (Bent 1937; Munro 1938) to take sitting birds. All these methods depend on surprise and require little or no aerial pursuit. Brewster (1880) reported Bald Eagles capturing waterfowl, including wild geese in flight, by swooping under the prey, turning upside down, and grasping the breast of the prey with its talons.

Griffin et al. (1982) during 3 seasons of field work saw many attempts by Bald Eagles to kill apparently healthy waterfowl. Only 5 attempts were successful of which 1 capture was a Snow Goose (*Chen caerulescens caerulescens*). The authors give no details except to say the goose was forced down into a field and fed upon.

On 21 January 1983, we observed an adult Bald Eagle pursue and injure a Snow Goose near DeSoto National Wildlife Refuge located in Harrison County, Iowa, and Washington County, Nebraska. The weather was clear, with a temperature of about 2° C, a slight north wind, and the ground partly covered by snow.

At 1621 H, a flock of about 500 Snow Geese was flushed from the ice by a Bald Eagle near an open-water area on DeSoto Lake. The flock circled briefly and flew eastward from the refuge for several kilometers, evidently to feed in surrounding croplands. The geese flew in a typical searching pattern characterized by wide wavy lines, low altitude, and circling over prospective fields. About 1650 H, a Bald Eagle was observed following several hundred meters behind the flock at the same altitude. The flock then gained altitude and flew northwest along a nearly straight course at ground speeds in excess of 50 kph, as measured on our vehicle's speedometer.

The eagle continued to pursue and slowly gained on the flock for about 5 km. At about 1700 H, the eagle flew into the middle of the flock causing it to suddenly split into 2 groups. The lead group continued flying north while the trailing group briefly circled, as if confused, and then continued northward. At this point, the eagle pursued a single goose from the flock. On 3 occasions, the goose tried to dive below the eagle, but each time the eagle would also dive until it was below the goose and they would briefly fly horizontally. Finally the goose dove toward a wooded fencerow; however, the eagle dove and caught the goose during the vertical descent. Although it could not be determined how the eagle grasped the goose, both

birds fell and separated just before hitting the ground and glided into a corn stubble field about 1 km from the road.

As we approached the area on foot, we saw an adult Bald Eagle and an adult Snow Goose standing in alert postures about 10 m apart. The eagle flushed about 0.5 km from us, while the goose stood motionless until we were 10 m away. It then flew along the ground for about 0.5 km. As it flew, we saw blood over much of the rump area, especially posterior to the left wing. After relocating the goose, we again approached. It flushed at about 10-15 m and flew strongly toward the refuge lake about 4 km away. We believe the eagle would have eventually killed the goose on the ground, if we had not intervened.

Although we have been conducting field studies of Snow Geese in the fall since 1976, in the middle Missouri River valley, this was our first observation of such an extended pursuit of geese by an eagle. While Snow Goose flocks on water or land will invariably flush when an eagle flies overhead, the Canada Goose (*Branta canadensis*) and ducks rarely do. We have occasionally observed eagles pursuing individual Snow Geese for short distances after flushing feeding flocks from crop fields. In each instance, the goose escaped by diving into tall vegetation or outmaneuvering the eagle in flight. On the basis of the intense response of Snow Geese to flying eagles, predation may occur more often than our observations indicate.

Journal paper No. J-11016 of the Iowa Agriculture and Home Economics Experiment Station, Ames, Iowa, Project No. 2427.

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Received 20 May 1985; Accepted 1 May 1986

## Osprey Captures Gray Squirrel

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At approximately 0800 H on 6 February 1982, I saw an Osprey (*Pandion haliaetus*) capture an Eastern Gray Squirrel (*Sciurus carolinensis*) at Blue Springs State Recreation Area, near Orange City, Florida. Several squirrels were foraging on the ground, in and around a picnic site in a partly cleared area of live oak (*Quercus virginiana*) and unidentified palms adjoining the St. Johns River. Using 7x binoculars, I watched the Osprey glide in a shallow dive for about 100 m along a curving flight-path. It flew from the river over the clearing, snatched the squirrel from the ground without pausing, then flew back over the river, where it was lost to view behind trees.

The capture occurred about 100 m away; unfortunately, my view of the moment of capture was obscured by shrubbery, so I was unable to observe the reactions of the victim, or other squirrels, to the attack. The squirrel was grasped firmly in the Osprey's talons, and was immobile; I did not record whether it was carried in one or both feet.

Wiley and Lohrer (1973) reviewed records of non-fish prey taken by Ospreys. These included mammals as large as ground squirrels and rabbits, as well as a variety of birds, reptiles, amphibians and invertebrates. More recent instances of atypical prey have been reported by Castrale and McCall (1983), Kern (1976), Layher (1984) and Proctor (1977). This is apparently the first record of an Osprey taking a tree squirrel (albeit from the ground), and is one of rather few observations of the actual attack. It is unfortunate that the ultimate use of the squirrel could not be observed.

Wiley and Lohrer (1973) recorded at least 9 non-fish prey, mainly cotton rats (*Sigmodon hispidus*), taken by a pair of Ospreys near Tampa, Florida, in 1972. They suggested that some inland-nesting Ospreys might exploit an abundant alternative food source, since they are presented with more opportunities for non-fish prey while travelling between the nest and scattered bodies of water than are coastal-nesting Ospreys.

The incident described here took place alongside a large, clear river in mild, calm weather under a light overcast sky. The long, stealthy approach and adept capture by the Osprey suggests that this incident may have

been a regular feature of its hunting routine. These circumstances support the suggestion that some Ospreys take prey other than fish in an opportunistic manner, without the pressure of poor fishing conditions, inexperience, or other constraints on more typical hunting behavior.

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Received 8 October 1985; Accepted 31 March 1986